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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,934	04/27/2005	Gerrit Cornelis Langelaar	NL 021055	3114

24737 7590 01/12/2009
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

VAUGHAN, MICHAEL R

ART UNIT	PAPER NUMBER
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2431

MAIL DATE	DELIVERY MODE
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01/12/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,934	Applicant(s) LANGELAAR, GERRIT CORNELIS	
	Examiner MICHAEL R. VAUGHAN	Art Unit 2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/27/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The instant application having Application No. 10/532,934 is presented for examination by the examiner. Claims 6, 8, and 10-15 have been amended. Claim 17 has been added, therefore claims 1-17 are pending in the application.

Response to Amendment

Specification

The objection to the specification has been withdrawn. The new title is accepted.

Claim Objections

Previous grounds for the objection to claims 6, 12, and 14 have been withdrawn. However, upon reexamination of the claims the following objections remain.

Claims 2-7, 9, 11, and 17 are objected to because of the following informalities:

Claims 2-7, 9, 11, and 17, are all objected to for being improper dependent claims. As dependent claims, they should refer back to the parent claim using "the" as opposed to using "a". For example claim 2 should refer to "[t]he method as claimed in claim 1". Each of the dependent claims has this deficiency.

Claims 11 and 14-17 are further objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the

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claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 11, dependent from claim 10, should further limit the scope of "a system for control of multimedia..." rather than claim "a record carrier for controlling of multimedia". Similar deficiencies can be found in claims 14-17. It appears Applicant has tried to create new independent claims incorporating further of other claims. This incorporation causes them to be dependent claims and they are being examined as such. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The amendments to claims 10, 11, and 14-17 are not sufficient to overcome the rejection under 35 U.S.C. 101 because the claimed invention is still directed to non-statutory subject matter.

Claims 10, 11, and 14-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claim 10, the claimed subject matter fails to squarely fall into one of the statutory classes of invention. Even though the preamble may recite a system, there is nothing in the body of the claim to require any system. The scope of the claim is

centered around manipulation of signals with no declaration of what is performing the manipulation. Each of the steps could be performed by hand.

As per claim 11, the claim is nonstatutory for being directed to energy. On page 9 of the specification, Applicant has disclosed that record carriers are transmission mediums. Therefore the claim is nonstatutory because signals are not patentable.

As per claim 14, the claim is nonstatutory because it relates to a computer readable medium yet fails to disclose the intelligent computer necessary for carrying out the embodied program. For functional descriptive material to become statutory, it must be embodied on a computer readable storage medium causing a computer to execute the steps of the program. Applicant must also not disclose that signals or carrier waves are examples of computer readable medium.

As per claim 15, the same rejection used for claim 11 and 14 applies. It does not fall into a statutory class of invention. Examiner cannot ascertain whether a system, record carrier or computer program are being claimed. It lacks the useful tangible result of being a system, and record carriers nor computer program are patentable.

As per claim 16, the claim is directed toward a computer program by inferring that claim 1 was a program. As such it is rejected for being software per lacks those requirements specified in the rejection of claim 14.

As per claim 17, it is rejected for the same reason as claim 14. Furthermore it also does not squarely fall into one of the statutory classes. Parent claim 12 is directed to a method claim whereas claim 17 is directed to a computer readable medium.

Response to Arguments

Applicant's arguments filed 10/7/08 have been fully considered but they are not persuasive. Examiner has carefully reviewed the prior art and considered the Applicant's arguments but must respectfully disagree for the following reasons.

Applicant has alleged that the prior art of record, Rao et al., hereinafter Rao, (USP 6,222,932) fails to teach the limitation "the value of the embedding parameters being dependent upon the bit-rate of the information signal". Examiner finds support of this teaching in Rao. The invention **as claimed** only recites the bit-rate being an input into the calculation of the embedding parameter. There is no limitation that discloses how the bit-rate must affect the calculation, only that it is part of the calculation of the embedding parameter. The value of the embedding parameter, referred to as the texture values by Rao are directed influenced by the bit-rate of the input signal. Rao specifically teaches that "each of the R, G, and B channels represented by, typically an eight or sixteen bit value" are fed into a linear map to generate the $L \cdot a \cdot b$. This $L \cdot a \cdot b$ is one of the embedding parameters and it does use the 8-bit or 16-bit values as input. The result is based on the calculation of all its inputs, so therefore the dependency of bit-rate as claimed is taught by Rao. The specification does not call for any specific or narrow interpretation so the Examiner has used the broadest reasonable interpretation of bit-rate. Examiner submits that the use of the 8 or 16 bit values of the pixel color anticipates the bit-rate of the claims. Consequently, the embedding parameter is

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dependent on the bit-rate because the bit-rate serves as input. If the image uses 8 bit pixel values, then 8 bits for each channel are linearly mapped. And if the pixel uses 16 bit pixel values, then 16 bits for each channel are linearly mapped. Applicant has stated that the Examiner has inferred that texture value is equivalent to bit-rate, but Examiner has not made that assertion. Examiner finds that the bit-rate influences the calculation of the texture value. Rao's system definitively takes the bit-rate of the signal into consideration in forming the watermark.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5-10, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Rao et al. (US 6,222,932 B1).

With respect to claim 1, Rao discloses the limitation of “embedding a watermark in an information signal” (column 4, lines 34-35) as an automatic image watermarking system.

Furthermore, Rao discloses the limitation of “the watermark embedding process is controlled by at least one embedding parameter, the value of the embedding

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parameter being dependent upon the bit-rate of the information signal” (column 3, lines 54-63) as the watermark strength is calculated based on the measured texture value and the set of parameters where the parameters are controlled by the texture value of the reference image. Since the parameters are controlled by the texture value and higher quality images have higher texture value examiner interprets texture value to be equal to bit-rate since higher bit-rate results in higher quality of each individual frame.

With respect to claim 2, Rao discloses the limitation of “determining the bit-rate of the information signal” (column 3, lines 60-61) measure a texture value of at least a portion of the image.

With respect to claim 4, Rao discloses the limitation of “the value of the embedding parameter is selected from a predetermined set of values in dependence upon the bit-rate of the information signal” (Fig. 1; column 5, lines 5-6) as a parameter database for determining the appropriate strength of the watermark.

With respect to claim 5, Rao discloses the limitation of “at least one of the robustness of the watermark signal and the observability of the watermark signal is dependent upon said embedding parameter” (column 3, lines 55-63) as calculating the watermark strength based on the measured texture value and the set of parameters associated with the measured texture value of the reference image.

With respect to claim 6, Rao discloses the limitation of “the value of the embedding parameter determines the watermarking technique utilized to embed the watermark in the information signal” (column 10, lines 7-12) as the DCT coefficients may be altered to a larger degree for an image with higher texture content as the watermark would be hidden better in the textural variations. Conversely, the DCT coefficients are only slightly altered for an image with lesser textural content. Rao specifies (column 3, lines 56-59) that the texture of the image defines the set of parameters used to determine strength of a watermark.

With respect to claim 7, it is rejected in view of the same reasons as stated in the rejection of claim 5.

With respect to claim 8, it is rejected in view of the same reasons as stated in the rejection of claim 1.

With respect to claim 9, it is rejected in view of the same reasons as stated in the rejection of claim 2.

With respect to claim 10, it is rejected in view of the same reasons as stated in the rejection of claim 1.

With respect to claim 14, it is rejected in view of the same reasons as stated in the rejection of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (US 6,222,932 B1) in view of Ahn (US 2003/0031377 A1).

It is noted that Rao does not explicitly teach the limitation of “information indicative of the bit-rate is encoded in the information signal, the bit-rate being determined by decoding the information indicative of the bit-rate.” However, Ahn discloses the abovementioned limitation (page 1, paragraph 0011) as extracting a decoded frame data and a compression data, where (page 1, paragraph 0012) the compression attribute information includes bit-rate information.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate teachings of Ahn into the system of Rao to reduce the processing complexity by selectively performing post-processing only if necessary based on the compression attribute information.

Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (US 6,222,932 B1).

With respect to claim 11, applicant teaches in the present specification that “a record carrier includes both machine readable medium and transmission medium” where ‘transmission medium’ is further defined as “both wireless and wire-line medium.” Examiner takes an official notice that it is commonly known in the art to transmit the data via the wired as well as wireless networks.

With respect to claim 15, applicant teaches in the present specification that “a record carrier includes both machine readable medium and transmission medium” where ‘machine readable medium’ is further defined as “computer memory, a floppy disk, a compact disk or equivalent.” Examiner takes an official notice that it is commonly known in the art to store information, including computer programs, on different forms of computer readable storage media.

Claims 12, 13, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (US 6,222,932 B1) in view of Xu (US 2004/0059918 A1).

With respect to claim 12, it is noted that Rao does not explicitly teach the limitation of “analyzing an information signal that may potentially comprise a watermark, so as to detect the watermark, the analyzing process being dependent upon the bit-rate of the information signal.” However, Xu discloses abovementioned limitation (page 2,

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paragraph 0011) as dividing the watermarked audio into a plurality of frames, determining magnitude of an autocorrelation of the embedded watermark's spectrum at a location in each of the plurality of frames, and mapping a plurality of data bits of each frame into code that may be correlated with an original watermark.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate teachings of Xu into the system of Rao to provide additional functionality of encoding digital watermark into an audio signal.

With respect to claim 13, it is rejected in view of the same reasons as stated in the rejection of claim 12.

With respect to claim 17, it is rejected in view of the same reasons as stated in the rejection of claim 12.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (US 6,222,932 B1) in view of Smith (US 6,018,748).

It is noted that Rao does not teach the limitation of "making available for downloading a computer program." However, Smith discloses the abovementioned limitation (column 6, lines 4-5) as a web site having an application program available for download. It would have been obvious to one of the ordinary skill in the art at the time of

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the invention to incorporate teachings of Smith into the system of Rao to simplify the distribution of the code by making it publicly available or download.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **MICHAEL R. VAUGHAN** whose telephone number is (571)270-7316. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:00pm, EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. R. V./

Examiner, Art Unit 2431

/Syed Zia/

Primary Examiner, Art Unit 2431